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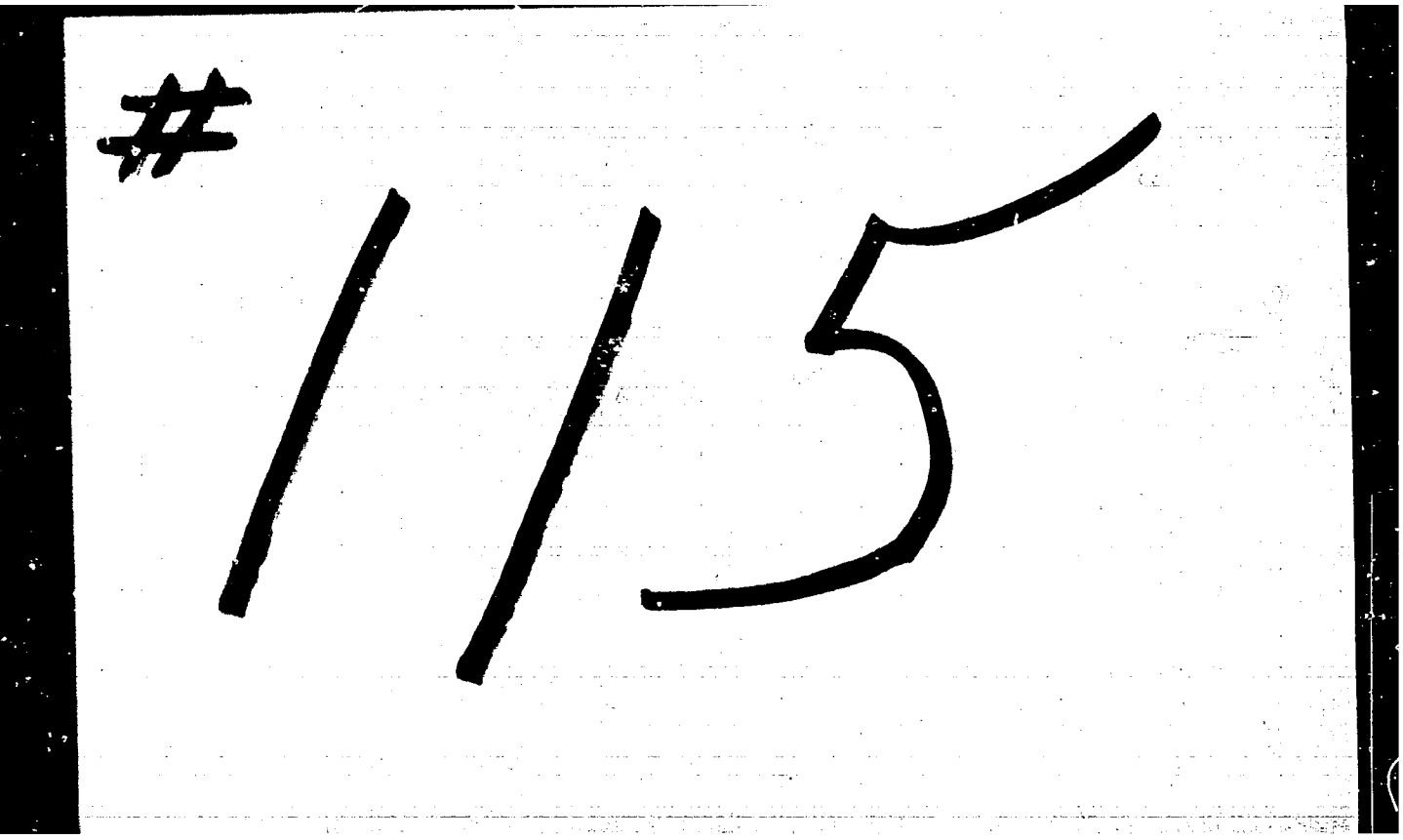

DUDZI'SKI, Zygmunt

Basic trends of reduction of work time and improvement of pay systems in the Union of the Socialist Soviet Republics. Przem chem 39 no.9:536-538 S '60.

1. Ministerstwo Przemysalu Chemicznego, Warszawa

DUDZINSKI, Zygmunt

The program to build up fundamentals for the evaluation of labor and the distribution of the wage fund. Praca zatezp spol 4 no.8:1-10 Ag '62.

DUDZINSKI, Zygmunt

Should we change the system of incentives or make it more efficient?
Praca zabezp spol 5 no.7:1-8 Jl '63.

L 32853-66
ACC NR: AF6024127 SOURCE CODE: PO/0022/65/000/007/0195/0200

38
B

AUTHOR: Dudzinski, Zbigniew (Master engineer)

ORG: Bureau of Communications Design Planning, Warsaw (Biuro Planow Perspektywicznych Lacznosci)

TITLE: Shortest telotransmission network for 18 Polish cities

SOURCE: Przeglad telekomunikacyjny, no. 7, 1965, 195-200

TOPIC TAGS: analytic geometry, telecommunication, communication network, plane geometry

ABSTRACT: The article deals with the development of a telotransmission network for Poland between the 18 major cities. The technical and economical criteria for an optimum design are discussed first; the problem of making the total length of conduits minimum is formulated next and its solution is interpreted in terms of plane geometry (Steiner's problem). Two cases are considered: 1) open polygon with branches, 2) closed polygon. The latter case is solved analytically by analogy with the "traveling salesman" problem and then applied to the particular conditions at hand with the given aerial distances between each two of the 18 cities (Warsaw, Bialystok, Bydgoszcz, Gdan'sk, Katowice, Kielce, Koszalin, Krakow, Lublin, Lodz, Olsztyn, Opole, Poznan', Radom, Rzeszow, Szczecin, Wroclaw, Zielona Gora). The following total lengths of the line were obtained in three stages of the solution: 2902 km, 2694 km, 2635 km. Orig. art. has: 7 figures and 2 tables. [JPRS]

SUB CODE: 17 / SUBM DATE: none / ORIG REF: 004 / OTH REF: 006
UDC: 621.391

Card 1/1 ls

0975 0705

SMIGIELSKI, Josef (Gdansk); ZABICKI, Andrzej (Gdansk); DUDZISZ, Jerzy (Gdansk)

Results of experimental studies on the reaction of turbine blade cascades with a velocity exceeding that of sound. Inst mass przep PAN no.13:19-36 '63.

DUDZISZ, Jerzy (Gdansk)

Multistage axial compressor with simplified construction technology. Inst masz przep PAN no. 18 103-118 '63.

DUDZIAK, Jerzy, mgr. inż.

The 809 experimental axial flow compressor and possibilities of using it in Polish industry. Przegl. mech. 22 no.20: 617-621 25 O'63.

1. Instytut Maszyn Przepływowych, Polska Akademia Nauk, Gdańsk.

DUBL', B., inzhener.

Installing propeller shafts by the light line method. Mor.flot 15 no.4:22-23 Ap '55. (MLRA 8:5)
(Propellers)

DUEL', B.

POPOV, A., inzhener; DUEL', B., inzhener.

New techniques for the repair of K6TS-54/90 engines. Mor.flot 16 no.10:17-18 O '56. (MLRA 9:11)

1. Zavod imeni Zakhfederatsii, Baku.
(Baku--Marine engines--Repairing)

DUEL', G.A.

Automatic control and regulation of pH in coke and coal chemicals production. Koks i khim. no.1:58-61 '64. (MIRA 17:2)

1. Bagleyskiy koksokhimicheskiy zavod.

DUEL', I.

Direct agreements with industry. Sov. torg. 33 no.6:34-36 Je '59. (MIRA 12:8)

1.Starshiy yuriskonsul't Soyuzglavtorga pri Gosplane SSSR.
(Wholesale trade)

DUEL', Il'ya Abramovich; SMIRNOV, A.I., red.; KIRAKOZOVA, N.Sh., red.; VOLKOVA, V.G., tekhn. red.

[Business fairs in the U.S.S.R.] Optovye iarmarki v SSSR. Pod red. A.I.Smirnova. Moskva, Gostorgizdat, 1963. 69 p. (MIRA 16:7)

(Fairs)

DUEL, I.

New in the supply of merchandise. Sov. torg. 37 no.10:38-42 O '63. (MIRA 17:1)

DUKL', Igor' Il'ich; LANINA, L.I., red.; RAKITIN, I.T., tekhn. red.

[Second discovery of the ocean] Vtoroe otkrytie okeana. Moskva, Izd-vo "Znanie," 1963. 31 p. (Novoe v zhizni, nauke, tekhnike. I Seriia: Molodezhnaia, no.24)
(MIRA 17:2)

DUEL', M. A. and LITVAK, N. R.

"Using an Automatic Heating Arrangement for a Hydraulic System," Elek. Sta., 23, No.7, 1952

DUEL', M. A., ..

Duel', M. A., and Litvak, N. R., "Some Requirements of Automatic Control of Boiler Assemblies," Elektricheskiye stantsii, 1953, No. 6, Pages 6-8.

DUEL', M.A., inzhener; MARINOVICH, G.A., inzhener.

Hydraulic regulators of combustion processes and of the preparation of pulverized coal designed by the plant "Teploavtomat." Rab.energ. 3 no.5:21-26 My '53. (MLRA 6:5)
(Governors (Machinery))

DUKE', M.A.; RABINOVICH, G.A.; DULEYEV, Ye.M., redaktor; FRIDKIN, A.M., tekhnicheskiy redaktor.

["Teploavtomat" type of hydraulic automatic regulators] Gidravlicheskie avtoreguliatory sistemy zavoda "Teploavtomat." Moskva, Gos. energ. izd-vo, 1954. 103 p. (MLRA 7:12)
(Automatic control)

DUHL', M.A., inzhener.

Use of automatic regulators of the combustion process. Elek. sta. 25 no.2:3-9 F '54. (MLRA 7:2)
(Steam boilers) (Automatic control)

BAZHALOV, Anatoliy Ivanovich; BERGINSKIY, Mikhail Lukich; DUEL', Mikhail Aleksandrovich; MANUYLOV, P.M., redaktor; SKVORTSOV, [redacted], tekhnicheskiy redaktor.

[Installation of heat and automatic control devices] Montazh priborov teplovogo kontrolia i avtoreguliatorov. Moskva, Gos. energ.izd-vo, 1955. 200 p. (MLRA 8:11)
(Automatic control) (Electric power plants)

Duel', M. A.

AID P - 2518

Subject : USSR/Electricity

Card 1/1 Pub. 26 - 2/32

Authors : Duel', M. A. and N. R. Litvak, Engs.

Title : On determining savings due to automatic control of combustion

Periodical : Elek sta, 6, 4-6, Je 1955

Abstract : The article stresses the greater efficiency of boilers equipped with automatic combustion controls and describes tests made with a one-drum boiler unit operating at 90 t/hr, at 32.5 atm pressure, using pulverized coal and equipped with automatic electronic combustion controls. The average operation efficiency is graphically demonstrated. Two diagrams are included.

Institution : None

Submitted : No date

DUKL', M. A. Cand Tech Sci -- (diss) " Study of the dynamics of systems of automatic (control of TAA) temperature control of superheated steam in certain barrel-type boiler units" Mos, 1957. 12 pp 20 cm. (Min of Higher Education USSR. Mos Order of Lenin Power Engineering Inst im V.M. Molotov), 100 copies

(KL, 7-57, 106)

DUEL', M.A.

104-3-4/45

AUTHOR: Duel' M.A. and Marov, I.F., Engineers.

TITLE: Experience in the automation of steam superheat control in boilers with surface steam-coolers. (Opyt avtomatizatsii regulirovaniya peregreva para na kotlakh s poverkhnostnymi parookhladitelyami)

PERIODICAL: "Elektricheskiye Stantsii" (Power Stations), 1957, Vol.28, No. 3, pp. 12 - 15 (U.S.S.R.)

ABSTRACT: Until recently the problem of providing automatic steam superheat temperature control in drum type boilers with surface type steam coolers (de-superheaters) has not been solved satisfactorily because of the unfavourable dynamic properties of the superheat temperature. However a number of power stations have experience of operating automatic superheat temperatures on boilers of this type.

Adjustments were made to superheat temperature regulators on boilers with surface steam coolers located both at the junction between superheaters (MAN boilers) and on the saturated steam side (boilers type TP-150).

The German MAN boiler has a single drum with a rated output of 105 t/h, drum pressure of 86 atm. superheat temperature of 500 C burning anthracite duff. The single drum vertical-water tube boiler type TP-150 has an output of 150 t/h a

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Experience in the automation of steam superheat control in boilers with surface steam-coolers. (Cont.)

drum pressure of 35 atm. superheated steam temperature of 420 C, and burns coal dust brand T. Both types of boilers are fitted with automatic controllers for feed water, combustion and fuel pulverisation. With the single impulse regulators with variable load and water supply the temperature variations in the MAN boilers are ± 10 - 12 C, in favourable conditions and ± 18 - 20 C in unfavourable conditions and therefore additional control elements were introduced. The circuit by which control of superheat temperature was arranged is illustrated in Fig. 1. In adjusting the regulators additional controlling impulses were arranged according to the rate of change of temperature in the gas duct beyond the superheater but this caused deterioration in control and it was not used.

The boiler type TP-150 has worse dynamic properties than the MAN boiler mainly because the steam cooler is on the saturated steam side. With hand control the steam superheat temperature variations reached ± 10 - 12 C even at constant load and it was calculated that with unfavourable conditions superheat steam temperature variations could reach ± 22 - 25 C. The use of auto-control of the combustion process by means of

Experience in the automation of steam superheat control in boilers with surface steam-coolers. (Cont.)

the "heat-air" circuit removed the sharp pressure variations in the steam pipe and made the furnace conditions more stable and in view of the good operation of the feed regulators the conditions were favourable for normal operation of steam superheat temperature regulators. The circuit that was used is illustrated in a diagram. The regulator maintains the superheat temperature within the limits of ± 2 - 3 C, or up to ± 4 C when the load varies by ± 12 - 15 t/h.

Operating experience with the electronic superheat temperature regulators showed that the dynamic characteristics of the control sections changed with tire because of slag deposition in the furnace, contamination of the heating surfaces and so on. Therefore, in operation it is periodically necessary to check the dynamic characteristics of the control sections and to adjust the regulators if necessary.

It is concluded that in selecting a scheme for automatic control of the temperature of superheated steam it is necessary to proceed from the dynamic characteristics of the controlled section. Calculation of the best adjustment conditions and evaluation of the quality of automatic steam superheat temperature control can be obtained with sufficient accuracy for

Experience in the automation of steam superheat control in boilers with surface steam-coolers. (Cont.)

practical purposes from experimental characteristics of acceleration or frequency characteristics. To extend the range of control of temperature and to compensate for the influence of feed control it is advisable to introduce into the circuit of the superheat temperature regulator an additional control impulse from the feed regulator. Good operation of the automatic feed regulator and the combustion process regulators facilitate the operation of the superheat temperature regulators. In this case even on boilers with surface steam coolers located on the saturated steam side it is possible to achieve satisfactory control of superheat.

There are 5 figures.

AVAILABLE: Library of Congress

Card 4/4

DUBL'

BOTEV, A.F., inzhener; DUBL', M.A., inzhener; MAROV, I.F., inzhener; SKRIK, D.A., inzhener.

Automatization of heat processes in electric power stations converted to burning natural gas. Elek. sta. 28 no.6:74-77 Je '57. (MLRA 10:8)
(Boilers)

28(1)

AUTHOR: Duel', Mikhail Aleksandrovich, Candidate of Technical Sciences, Head of the Automation-Group, Senior Instructor at the Chair

SOV/161-58-4-25/28

TITLE: Automatic Temperature Regulation of the Superheated Steam on Some Types of Vertical-tube-boilers With Surface-steamcoolers (Avtomaticheskoye regulirovaniye temperatury peregretogo para nekotorykh tipov barabannykh kotlov s poverkhnostnymi parookhladitelyami)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Elektromekhanika i avtomatika, 1958, Nr 4, pp 217 - 230 (USSR)

ABSTRACT: The automatic regulation of the temperature of superheated steam for vertical-tube-boilers with the help of surface-steamcoolers has not been solved satisfactorily so far, but in a number of power stations positive experience was won with such automatic regulators. Before the introduction of this regulating method, some experimental examinations of the dynamic properties of the regulating range of the superheating temperatures were carried out on some types of vertical-tube-boilers, namely the MAN type and the type TP-150. The main results of this examination are given here. The MAN high-pressure boiler with an output of 105 t/h, a pressure of 85 kg/cm^2,

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and a temperature of the superheated steam of 500 degrees, has a superheater which is composed of a radiation- and a convection-part with a surface of 350 and 300 m^2 respectively. Between these two parts, a horizontal steam cooler is arranged, with a surface of approximately 18 m^2. The TP-150 medium-pressure boiler with a pressure of 35 kg/cm^2 and a temperature of the superheated steam of 420° Celsius, has an upright convection-type superheater with a surface of 800 m^2. The surface steamcooler with a surface of 32 m^2 is situated in the steam dome which acts at the same time as a collector for the saturated steam. The recording of the dynamic characteristics has been given in the papers (Refs 1-5). The results of the successful experiments are given here. The analysis of the experimental results show that the superheating-regulating ranges are non-linear to a greater or smaller degree for both boiler types. The errors which develops at the transition from a real section of the superheating to a linear model, are, however, not great enough to have to waive the already carefully worked out method of the linear theory, when solving questions of the temperature regulation of superheated steam (Refs 6,7). Based on the experimental dynamic characteristics, the parameters were

determined for the tuning of single-impulse regulators of the superheating temperature on the examined boiler units, and the regulating processes for these systems were established (Refs 3,6). With the single-impulse regulation producing unsatisfactory results, a thermo-element was introduced into the diagram. The permanent operation of such a temperature regulation on 5 MAN boilers showed that the superheating regulators are working reliably and maintaining the temperatures within the limits of $\pm$ 5° Celsius, while the temperature fluctuations under equal circumstances amount to $\pm$ 12 - 15° Celsius with hand regulation (Refs 6,7). The regulating range for the TP 150 boilers shows worse dynamic properties compared with the MAN boilers. This is affected by the steamcoolers being situated in front of the steam superheaters (on the saturated side). The boilers, however, operate considerably better after the alteration of the automatic regulation of the combustion process. A joint regulator for all three boilers of a unit, independent pressure regulators and an economical regulation of the ratio between heat and air (Ref 2) instead of a ratio between fuel and air, were employed. Electronic regulators of the VRI-system are now used with this. Apart from the

Automatic Temperature Regulation of the Superheated Steam on Some Types of Vertical-tube-boilers With Surface-steamcoolers SOV/161-58-4-25/28

regulator of the system by Trubkin for the boiler-feed, the mentioned measures have created favorable conditions for a normal operation of the temperature regulators of the superheated steam, even on a single-impulse diagram (Refs 5,7). The publication of this article was recommended by the Kafedra teplovogo kontrolya i avtomatiki Moskovskogo energeticheskogo instituta (Chair for Heat Control and Automation at the Moscow Institute of Power Engineering). There are 11 figures and 7 Soviet references.

ASSOCIATION: Kafedra kotlostroyeniya Khar'kovskogo Politekhnicheskogo Instituta (Chair for Boiler Construction at the Khar'kov Polytechnic Institute)

PRESENTED: May 9, 1958

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SOV/96-58-9-4/21

AUTHOR: Duel' M.A., Candidate of Technical Science

TITLE: The Effectiveness of Automatic Control of Boilers in Power Stations (Effektivnost' avtomatizatsii kotloagregatov elektro-stantsiy)

PERIODICAL: Teploenergetika, 1958, Nr 9, pp 26 - 30 (USSR)

ABSTRACT: All the boilers in the main power stations of the Khar'kov power system are provided with automatic equipment for the control of combustion, feed-water, fuel pulverisation, superheat temperature and continuous boiler blow-down. The medium-pressure boilers have two-signal feed-regulators on the Trubkin system, and the high-pressure boilers have three-signal electronic regulators of the type introduced by the All-Union Thermo-technical Institute. The 'heat-fuel' system gives the best control of combustion and has been introduced on 70% of the boilers that have automatic control of combustion. Electronic automatic controllers of the All-Union Thermo-technical Institute type are used on all the boilers to control superheat temperature and continuous blow-down. The fuel-mills are mostly provided with electro-mechanical regulators of the Central Boiler

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The Effectiveness of Automatic Control of Boilers in Power Stations

Turbine Institute type. The controllers are very fully used. The principal economy that resulted from their introduction was in the number of staff required but there was also economy of fuel and electric power. Details of the economies are given. As it is not easy to evaluate the effectiveness of automatic control systems, a special series of tests was undertaken. A graph is given of the relationship between the boiler efficiency and steam load variations with manual and automatic control in one particular case. Manual control impairs efficiency only when the load variations are greater than 8 - 9%. With automatic control there is still some loss of efficiency but it is not so great. Numerous tests of this kind indicate that the gain in efficiency realised by automatic control of the combustion process is on an average not less than 0.5 - 0.6% under normal operating conditions. There is a further 0.2% fuel economy because the steam conditions at the turbine stop-valve are more stable. Automatic control of the mill reduced the power consumption for milling by about 1 kWh per ton of fuel. When automatic equipment is used the staff must be well qualified, and this promotes their general development. The boiler equipment becomes more reliable when automatic control is

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used, and the time of operation without faults is increased. A formula is given for calculating the amortisation of automatic equipment for boilers, and a specimen tabular calculation relating to automatic control of a modern drum-type high-pressure boiler. The calculation is based on costs only and indicates an amortisation of about three years. It will be noticed that the greater part of the economy results from staff reduction. A well-founded procedure for determining the advisability of introducing automatic systems is urgently required, in order to justify the capital expenditure.

There are: 1 figure, 1 table, no literature references.

ASSOCIATION: Khar'kov energo

1. Boilers--Control systems 2. Temperature--Control 3. Combustion --Control

Card 3/3

AUTHOR: Dyal', M.A. (Cand.Tech.Sci.) SOV/96-58-12-6/18

TITLE: An investigation of the dynamics of the automatic superheat-temperature control system for a high-pressure drum-type boiler. (Issledovaniye dinamiki sistemy avtomaticheskogo regulirovaniya temperatury peregreva para barabannogo kotloagregata vysokogo davleniya)

PERIODICAL: Teploenergetika, 1958, No.12, pp. 31-35 (USSR)

ABSTRACT: The investigation described, relates to a boiler with an output of 105 tons per hour at a pressure of 86 atm., the super-heated steam temperature being 540°C. The boiler burns pulverised fuel and employs dry ash-removal; it has two induced and two forced-draught fans. The areas of the radiation and the convective parts of the super-heater are 356 and 300 sq.m. respectively. The fuel is anthracite dust. Electronic feed and superheat regulators are used and there is electro-mechanical control of combustion and fuel preparation. The two-circuit superheat-temperature control system is represented diagrammatically in Fig.1. An equation is given for the motion of the superheat regulator, and includes a constant K which allows for the degree of action of the velocity servo-couple. Lines of equal damping for various values of K are charted in Fig.2. Calculated curves of the control process are given in Fig.3., again related to K. It is clearly seen that increasing the value of K up to about 0.6 greatly improves the characteristics of regulation. Further increase, to value of 1, effects little additional improvement.

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An investigation of the dynamics of the automatic superheat-temperature control system for a high-pressure drum-type boiler.

On the basis of these results, specific recommendations are made about adjustment of the regulator. Fig.4. shows curves of the regulation process for a regulator that received a total signal from a main and a velocity thermo-couple and is adjusted in the recommended way. There is good agreement between the calculated curve (1) and the experimental curve (2). Curve (3) is a regulation curve previously obtained with a single-signal superheat-temperature controller, and it will be seen that the variations are very much greater. The introduction of the signals from the velocity thermo-couple has considerably improved the process of control. Similar curves for the case of a disturbance originating on the furnace side are given in Fig.5. In this case, too, the use of a velocity thermo-couple improves the control. Calculations show that with a boiler of the type considered, the variations in superheat temperature with a two-signal circuit on the controller do not exceed $\pm$ 3 - 5°C when main and external disturbances occur, whilst with a single-signal system the corresponding limits are $\pm$ 10 - 15°C. An automatic superheat-temperature control circuit for high-pressure boilers, using the All-Union Thermo-Technical Institute's system of electronic regulators is sketched in Fig.7. This method of control has been in use for a considerable time on five high-pressure boilers, under

An investigation of the dynamics of the automatic superheat-temperature control system for a high-pressure drum-type boiler.

normal operating conditions the superheat temperature is reliably maintained to within ± 5°C, as denoted by the recorder diagrams in Fig.8. With manual control under approximately the same conditions the superheat temperature variations were ± 10 – 12°C. In addition to other benefits, accurate control of the superheat temperature resulted in appreciable fuel saving. There are 8 figures and 4 Soviet references

ASSOCIATION: Khar'kovenergo

DUHL', M.A., kand.tekhn.nauk; RABINOVICH, O.M., prof.; STANKEVICH, G.L., insh.; FAYERSHTEYN, D.G., kand.tekhn.nauk

Testing the steam superheater of a high-pressure boiler fired with ash. Elek.sta. 29 no.8:22-25 Ag '58. (MIRA 11:11)
(Superheaters--Testing)

SOV/96-59-7-3/26

AUTHOR: Duel', M.A., Candidate of Technical Sciences

TITLE: The Requirements of Steam-power Equipment in the Integrated Automation of Unit-type Power Stations (O trebovaniyakh k teploenergeticheskomu oborudovaniyu pri Kompleksnoy avtomatizatsii blochnykh elektrostantsiy)

PERIODICAL: Teploenergetika, 1959, Nr 7, pp 12-13 (USSR)

ABSTRACT: This article is mainly a list of defects observed in the equipment of unit-type power stations. In the large unit-type power stations that are being constructed, integrated automatic control of all processes will be necessary; the equipment should both meet operational requirements and be suitable for automatic control. Existing power equipment fails to meet these requirements in a number of ways, including the following: the characteristics, circuits and operating conditions of the main equipment are not suitable for automatic control;

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the range of output of the auxiliary equipment does not conform to the range of control of the main sets; and control equipment is inadequate. Also: combustion in furnaces is not stable enough; there are defects in separating devices and in the control of super-heat; there are many leaks in the boiler gas and air ducts; and fuel control is impaired by the presence of fuel dust in the primary air. Other difficulties are that fuel is not delivered steadily; automation is hindered by the excessively high output of pulverised-fuel feeders and the inadequate output of induced- and forced-draught fans and similar faults; and condensate pumps are often defective. Typical features of new unit-type sets are: increase in unit output; increase in steam conditions; the use of reheat; and further improvements in the thermal circuit with development of regeneration. So far the realisation of these principles has mainly taken the form of a general increase in size, volume, weight and so on, without qualitative changes in the design of the main and auxiliary equipment. Many new designs of set make no

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provision whatever for automation. Moreover, the manufacturers continue to deliver components that have long since been re-designed and superceded in the light of operating experience. The complexity of the internal steam piping arrangements of unit sets is criticized. The thermal circuit has been made much more complicated by developments in regeneration. It is evident that certain boiler and turbine manufacturers have made no provision for the special operating conditions of unit-type sets. A unit-type power installation should be designed and delivered as an entity and the individual components should comply with the requirements of the whole. Communications and inter-connections should be simple, there should be the smallest possible number of fittings, and the thermal circuit should be simple. The install-

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ations cannot be operated reliably and economically unless they are made fully automatic, and this fact should undoubtedly be allowed for in the design of new equipment.

ASSOCIATION: Kharkovenergo

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28 (1) 06290
AUTHOR: Duel', M. A., Candidate of Technical Sciences SOV/119-59-11-4/13

TITLE: On the Means of Attaining a Comprehensive Automation of New Thermoelectric Power Plants

PERIODICAL: Priborostroyeniye, 1959, Nr 11, pp 8-10 (USSR)

ABSTRACT: In agreement with the plan of developing electric energy in the USSR, which was worked out by the XXI Party Congress, a number of large electric power plants with power outputs of 150000, 200000, and 300000 kw will be built. The general conditions for the automation of these electric power plants are given in six points: (1) Maximum centralization of operation. (2) Production of automatic control devices. (3) Elaboration of regulations for the quality and operational reliability of these control systems. (4) Close cooperation between checking, automatic control, safety measures, etc. (5) Automatic control of working equipment. (6) Suitable selection of variations for the starting and stopping of the apparatus under a certain program. Experiments showed that the usual methods of regulation and control are not suited for these purposes, and that therefore new methods must be worked

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out. The devices available for the automation of technological processes have too large dimensions, they do not possess the degree of reliability necessary in power engineering, and are in need of permanent supervision. Moreover, elements of computer technique have hitherto not been used in automatic control systems. It is criticized that the instrument-building industry produces no high-speed and reliable regulators in which liquids or solids are used as regulating media. The centralization of the control of power plants requires large switchboards, and as an example, the switchboard designed by the Khar'kovskoye otdeleniye Teploelektroproyekta (Khar'kov Branch of Teploelektroproyekt) is discussed. Switchboards had a length of 14 m in spite of the use of small-sized instruments and in spite of the fact that only 150 heat-control instruments, 185 control elements, and 50 electronic control devices were used. Altogether, 30 km of cables were laid. It is further found that the organization of the control of power plants must be worked out on an entirely new basis, and that the following problems must be solved: (1) The system of automatic control must be constructed for the

respective unit, must consist of standardized elements, and must be fully reliable. (2) The control instruments and the central switchboard must be suited for operations of computation, but also for the visual control of the main parameters. (3) For the switchboard operator it must be possible to watch the operation of the power plant. (4) The computer elements must be used by applying computer methods. (5) The same holds for television devices. (6) It is necessary to solve the problem of low-voltage commutators. As an example, the costs for the operational equipment, controllers, and automatic regulation for a plant with a power output of 150000 kw are given. Special experiments carried out at the Khar'kovenergo showed a saving of 300000 rubles per annum by means of improved heat economy. There is 1 table.

DUEL', Mikhail Aleksandrovich; RABINOVICH, Grigoriy Aronovich; SHLIOZBERG, Yuriy Abramovich; DULEYEV, Ye.M., red.; LARIONOV, G.Ye., tekhn. red.

[Automatic hydraulic regulators of thermal processes] Gidravlicheskie avtomaticheskie reguliatory teplovykh protsessov. Moskva, Gos.energ.izd-vo, 1961. 199 p. (MIRA 15:2)
(Electric power plants—Equipment and supplies)
(Hydraulic control)

RUSHCHINSKIY, V.M., kand.tekhn.nauk; DUEL', M.A., kand.tekhn.nauk; DEMENT'IEV, V.A., inzh.; NECHAYEV, B.Ya., inzh.; [illegible]IDA, V.A., inzh.; SHTEFAN, V.Ye., inzh.

Experimental system for the control of the 67-2SP boiler and K-50-90 turbine block by means of a control computer. Teploenergetika 9 no.10:32-35 O '62. (MIRA 15:9)

1. TSentral'nyy nauchno-issledovatel'skiy institut kompleksnoy avtomatizatsii i Khar'kovskoye upravleniye energokhozyaystva. (Automatic control) (Electric power stations)

DUKL', M.A., kand. tekhn. nauk; MAR'IENKO, A.F., insh., dissertant; STYEPAN, V. Ye., insh.

Determination of optimal programs for starting the K-50-90 steam turbine using the model of its heating processes. Teploenergetika 11 no.12:77-79 D '64 (MIRA 18:2)

1. Gosudarstvennyy vsesoyuznyy tsentral'nyy nauchno-issledovatel'skiy institut kompleksnoy avtomatizatsii i Khar'kovenegro.

DUKL', M.A., kand.tekhn.nauk; MAR'YENKO, A.F., inzh.; KHRUSHCH, L.M., inzh.

Determination of dynamic characteristics of single-phase heating sections of a boiler unit in a nonsteady mode of operation. Teploenergetika 12 no.1:87-89 Ja '65. (MIRA 18:4)

1. TSentral'nyy nauchno-issledovatel'skiy institut kompleksnoy avtomatizatsii.

DUEL', M.A., kand. tekhn. nauk; GORELIK, A.Kh., inch.

Determination of programs for automatic starting of turbine units using analog computers. Teploenergetika 12 no.4:13-17 Ap '65. (MIRA 18:5)

1. Tsentral'nyy nauchno-issledovatel'skiy institut kompleksnoy avtomatizatsii.

DUEL', M.A., kand. tekhn. nauk; GOPP, A.Yu., inzh.; ZAK, I.D., inzh.; MARTYENKO, A.F., inzh.; LIBERMAN, A.A., inzh.; SHTEFAN, V.Ye., inzh.

Results of the tests of information input systems of a computer controlling a power system. Energ. i elektrotekh. prom. no.3:7-11 Jl-S '65. (MIRA 18:9)

DUEL'N.A

ACCESSION NR: AP4013439 S/0129/64/000/002/0019/0024

AUTHOR: Yuganova, S. A.; Bondarenko, Ye. A.; Duel', N. A.; Lincheveksaya, M. I.; Nesterova, M. D.

TITLE: X-ray structural and electron microscopic analysis of type 16-25 and 18-40 alloys

SOURCE: Metalloved. i term. obrab. metallov, no. 2, 1964, 19-24

TOPIC TAGS: 16-25 alloy, 18-40 alloy, alloy steel, low carbon alloy steel, ferro-chrome-nickel steel, Laves phase steel alloying, residual phase, primary Laves phase, secondary Laves phase

ABSTRACT: The phase composition and microstructure of some ferro-chromium and ferro-chromium-nickel alloy steels were analyzed. The cast alloys were water quenched from 1200C, then were aged at 700 and 800C for 1-5000 hours and at 850C up to 300hours. After heat treatment, the electrolytically isolated

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ACCESSION NR: AP4012420

residual phases and microstructure of the alloyswere analyzed by conventional and electron microscopic methods. Laves phases and binary carbides can be noted in low carbon alloys on ferro-chrome-nickel base containing varying degrees of tungsten in addition to niobium carbides and titanium carbonitrides. Alloying with tungsten and niobium affects the phase formation process in different ways: an increase in tungsten concentration in the alloys greatly increases the quantity of the secondary Laves phase, but increases insignificantly the quantity of binary carbides and primary Laves phase. An increase in the niobium content as well as titanium content in the alloy is accompanied by an increase and marked consolidation of the primary Laves phase, while the quantity of the secondary Laves phase decreases. In addition, when the titanium content is increased, secondary phases that are rich in nickel, titanium and aluminum, manifest themselves. An increase of the nickel content with a decrease in iron reduces the quantity of the primary and secondary Laves phases. Orig. art. has: 6 figures and 2 tables.

Card 2/3

ACCESSION NR: AP4012429

ASSOCIATION: TsNIITMASh (Central Scientific Research Institute of Heavy Machine Building)

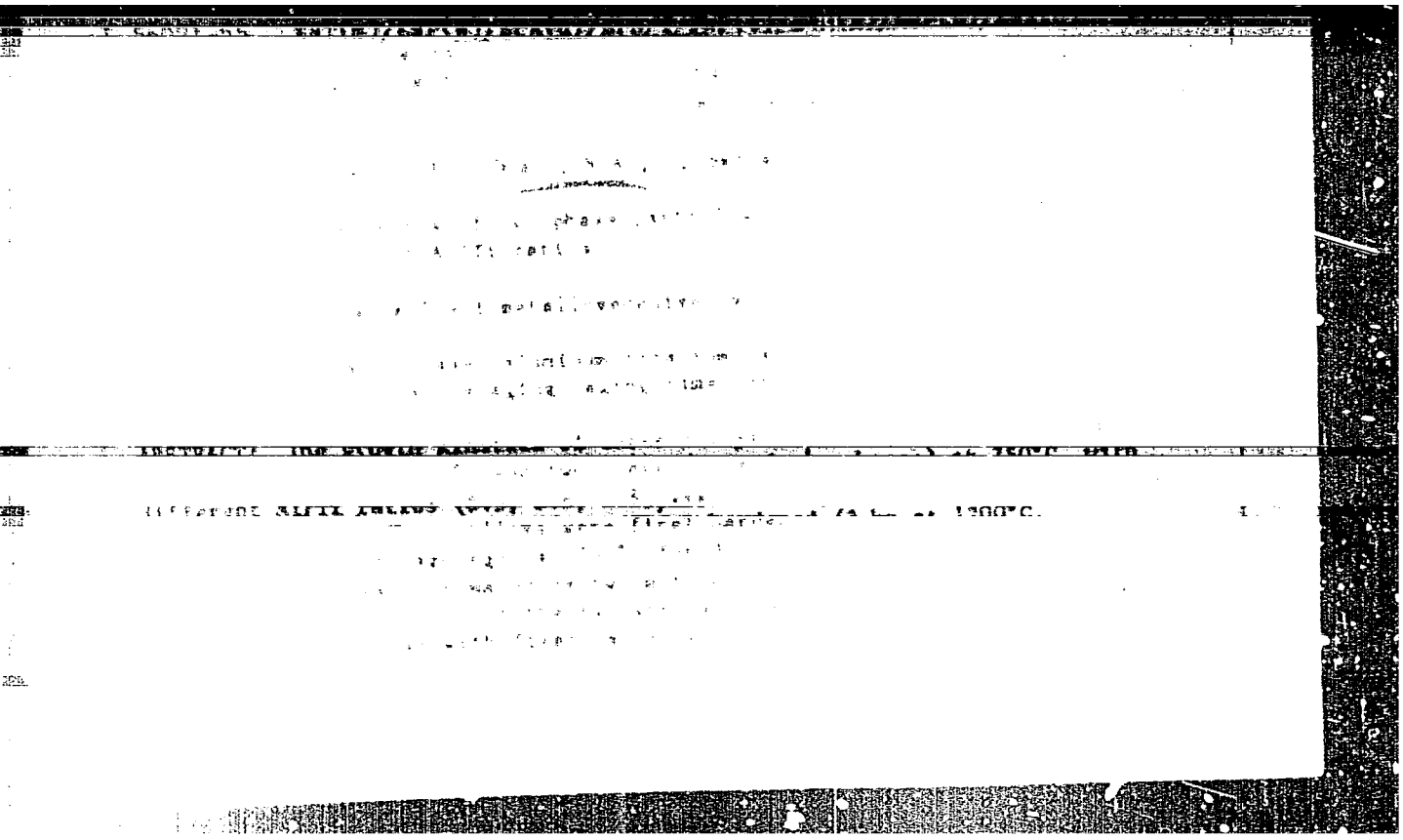
SUBMITTED: 00 DATE ACQ: 03Mar64 ENCL: 00

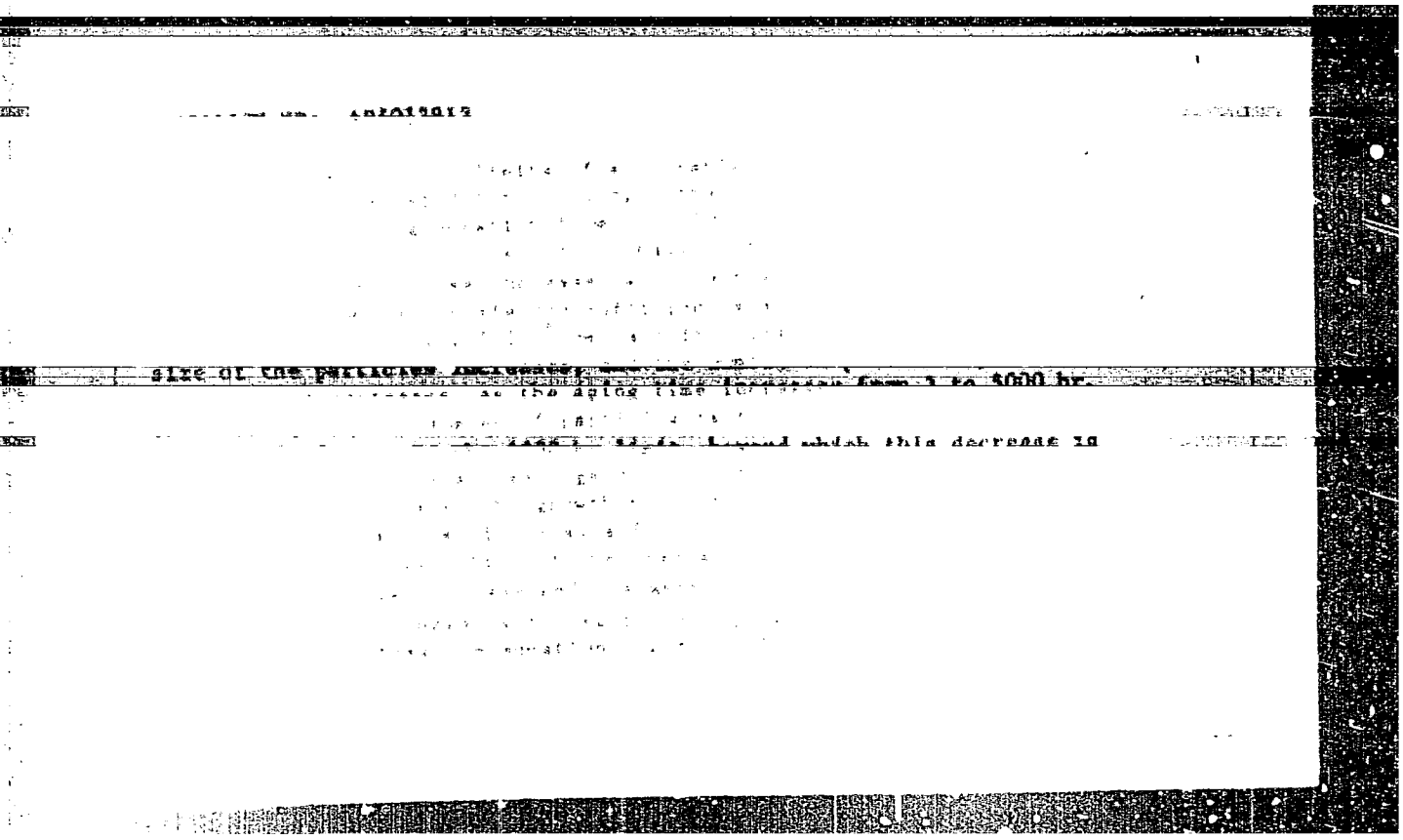
SUB CODE: ML NO REF SOV: 005 OTHER: 001

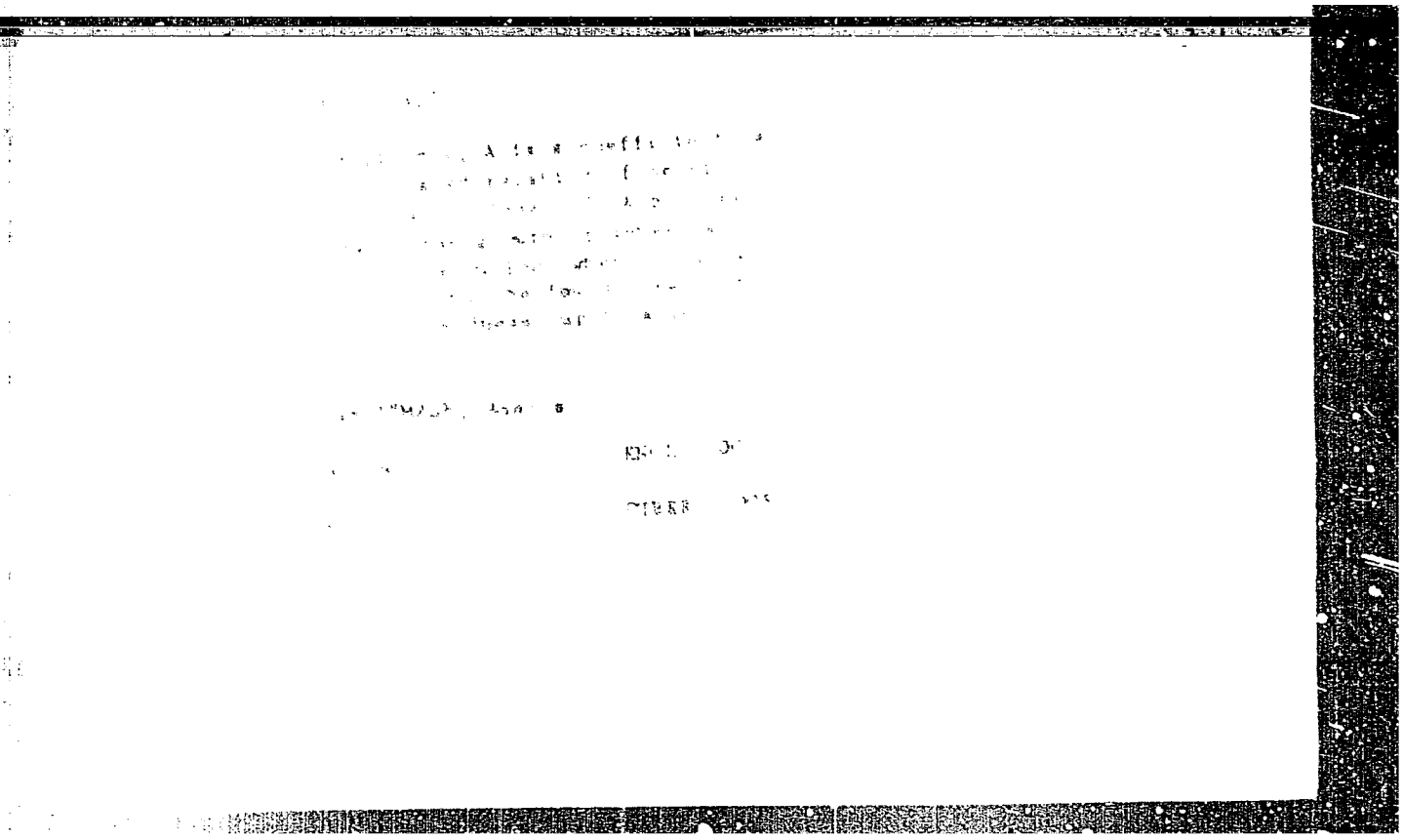
Card 3/3

KHIROV, V.A.; ZADOROZHNYY, V.F.; SMOL'YANINOV, I.S.; ZHUKOVA, G.P.; DUOIN, M.A.; KONYAYEV, B.Ya.

Utilization of the waste products of the synthetic rubber manufacture as inhibitors of acid corrosion. Khim. prom. no. 4:307-310 Ap '64. (MIRA 17:7)







DUEL', P.A.

KOROZOV, Sergey Yevdokiyevich; DUEL', P.A., redaktor; SHTEYNGEL', A.S., redaktor izdatel'stva

[Practical manual for the drilling rig mechanic] Prakticheskii spravochnik mekhanika kontory bureniia. Baku, Azerbaidzhanskoe gos. izd-vo neftianoi i nauchno-tekhn.lit-ry, 1957. 198 p. (MLRA 10:9)
(Oil well drilling)

NEGREYEV, V.F.; FARKHADOV, A.A.; DUBL', P.A.

Efficient methods for corrosion prevention in submarine oil-field equipment. Za tekh.prog. 3 no.9:45-48 S '63. (MIRA 16:10)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut po proyektirovaniyu predpriyatiy dlya dobychi nefti s morskogo dna.

DUKL', V.V.

Welding in a carbon dioxide atmosphere on the "Druzhba" Petroleum Pipeline. Stroi. truboprov. 8 no.6:4-6 Je '63. (MIRA 16:7)

1. Starshiy insh. stroitel'no-montazhnogo upravleniya No. 3 Svarochno-montazhnogo tresta, Kuybyshev.
(Petroleum pipelines--Welding)

YUGOSLAVIA

DUERRIGL, Dr T. [affiliation not given].

"Fourth Labor Medicine Seminar."

Zagreb, Lijecnicki Vjesnik, Vol 85, No 7, July 1963, pp 775-777.

Abstract: The seminar, held at Kastel Star near Split 20-25 May 1963, was concerned with rheumatic and neuropsychiatric illnesses in industry. Rheumatic diseases were the main topic, viz., etiology, pathology, the role of the endocrine system, diagnosis, prevention, therapy, rehabilitation. A separate report was devoted to rheumatic diseaseas and neuroses among men employed in lighthouses, sailors, and divers.

No references.

1/1

DUFALA, Jozsef, mernok

Some problems of modern interior decoration. Borsod szemle 6 no. 4:51-52 '62.

1. Miskolci Tervezo Iroda.

DUFEK, A.

Experience with introducing planned preventive repairs. p. 123.
STROJIRENSAK VYROVA, Prague, Vol. 2, no. 3, Mar. 1954.

SO: Monthly List of East European Accessions, (EEAL), LC: Vol. 5, No. 6, June 1956, Uncl.

DUFEK, F.

The Sub-Balkan Railroad, p. 316, ZELEZNICE (Ministerstvo dopravy) Praha, Vol. 4, No. 12, Dec. 1954

SOURCE: East European Accessions List (EEAL) Library of Congress, Vol. 4, No. 12, December 1955

DUFEK, F.

New construction machinery for electrification of railroads. p. 35.

ZELEZNICNI DOPRAVA A TECHNIKA. (Ministerstvo dopravy) Praha, Czechoslovakia.
Vol. 7, no. 2, 1959

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 11,
November 1959.

Uncl.

DUFEK, Prastimek

How to proceed in consequence of the Decisions of the Central Committee of the Czechoslovak Communist Party. Zel dop tech 11 no.7:190 '63.

1. Namestek ministra dopravy.

DUPEK, Frantisek

Problems of maintenance and general repair railroad tracks and track construction projects. Doprava 7 no.1:11-14 '65.

1. Deputy Minister of Transportation.

DUFEK, J.

Janda, J. Repair shops, repair personnel, and repairs of radio equipment. p. 97. SDELOVACI TECHNIKA, Praha, Vol. 2, no. 4, Apr. 1954.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, no. 10, Oct. 1955, Uncl.

DIAMANT,J.; DUFEK,J.; HOSKOVEC,J.; KRISTOF,M.; PEKAREK,V.; ROTH,B.; VELEK,M.; Technicka spoluprace: Kubickova ,d.s. M.

Electroencephalographic study of hypnosis. Cesk. psychiat. 55 no.5:285-295 O '59.

1. Psychiatricka klinika a neurologicka klinika KU v Praze, Ustredni zdravotni ustav MV; psychiatricka lecebna v Praze 5.
(ELECTROENCEPHALOGRAPHY)
(HYPNOSIS physiol.)

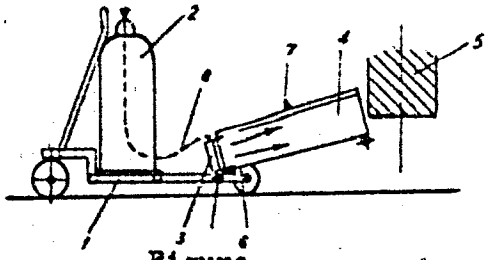
S/262/62/000/006/014/021
I007/I207

AUTHORS: Dufek Jan, Stratil František.

TITLE: Device for heating engines during starting

PERIODICAL: Referativnyy zhurnal, otdel'nyy vypusk. 42. Silovye ustanovki, no.6, 1962, 73, abstract 426352. (Chekhosl. pat., kl. 46c4, 15, 46a7, 1/02, no.95904, 15.07.60).

TEXT: A patent has been issued for a device for heating automobile and aircraft engines during starting in winter. The bottle (2)



Figure

Card 1/2

Device for heating engines S/262/62/000/006/014/021
I007/I207

(see figure) filled with liquefied gas, the gas -pressure reducing valve, the burner (3) and the radiator (4) are mounted on the truck (1). The radiator can be rotated so as to direct the radiant heat toward the engine crankcase (5); the radiator is provided with holes (6) for the absorption of cool air. Part of the heating air flow is re-circulated through the duct (7) to the upper section of the radiator. For the heating of aircraft engines, the radiator is mounted on a hoisting device. Gas is fed to the heating radiator through the flexible hose (8). There are 4 figures.

[Abstractor's note: Complete translation.]

Card 2/2

S/061/63/000/001/057/061
B144/B186

AUTHORS: Lidařík, Miloslav, Dufek, Jan, Starý, Stanislav, Smrčka, Jindřich

TITLE: Production of epoxy resins

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 1, 1963, 539, abstract 1T130 (Czechosl. patent 100282, July 15, 1961)

TEXT: Epoxy resins are obtained when epihalohydrin and its derivatives react in the presence of a Friedel-Crafts catalyst with mono- and polyatomic phenols, alcohols, bisphenols, or phenol resins, and the resultant mixture of halohydrin ethers of phenol compounds (or the mixture of separately prepared halohydrin ethers) and alcohol is dehydrohalogenated in high-alkaline medium. By way of example, 1 mole diane and 10 moles ethyl chlorohydrin are mixed in a flask and heated under stirring to 70°C. 1% triethanol amine (related to diane) and 3% NaCl in 15% aqueous solution are added. The mixture is heated to boiling and then left for 4 hrs. Then, 0.12 mole glycerin-tris-chlorohydrin ether is introduced, which has been prepared by reaction of 3 moles ethyl chlorohydrin and 1 mole

Card 1/2

Production of epoxy resins

S/081/63/000/001/057/061
B144/B186

glycerin with BF_3 catalyst by heating to 65-75°C for 3 hrs. To the mixture of chlorohydrin ethers, 2.36 moles NaOH in the form of 20% aqueous solution is added dropwise within 3 hr 45 min and left for 15 min. Then, 300 g benzene is added, the aqueous layer is separated and the resin solution is neutralized with CO_2 to pH 6.5. The solution is dried with calcined soda and filtered, and the transparent filtrate is separated from the ethyl chlorohydrin excess by low-pressure distillation. [Abstracter's note: Complete translation.]

Card 2/2

DUFEK, Jan, ins.

In the new year 1964. Siln doprava 12 no.1:1 Ja '64.

1. Namestek ministra dopravy.

DUFEK, Jan, ins.

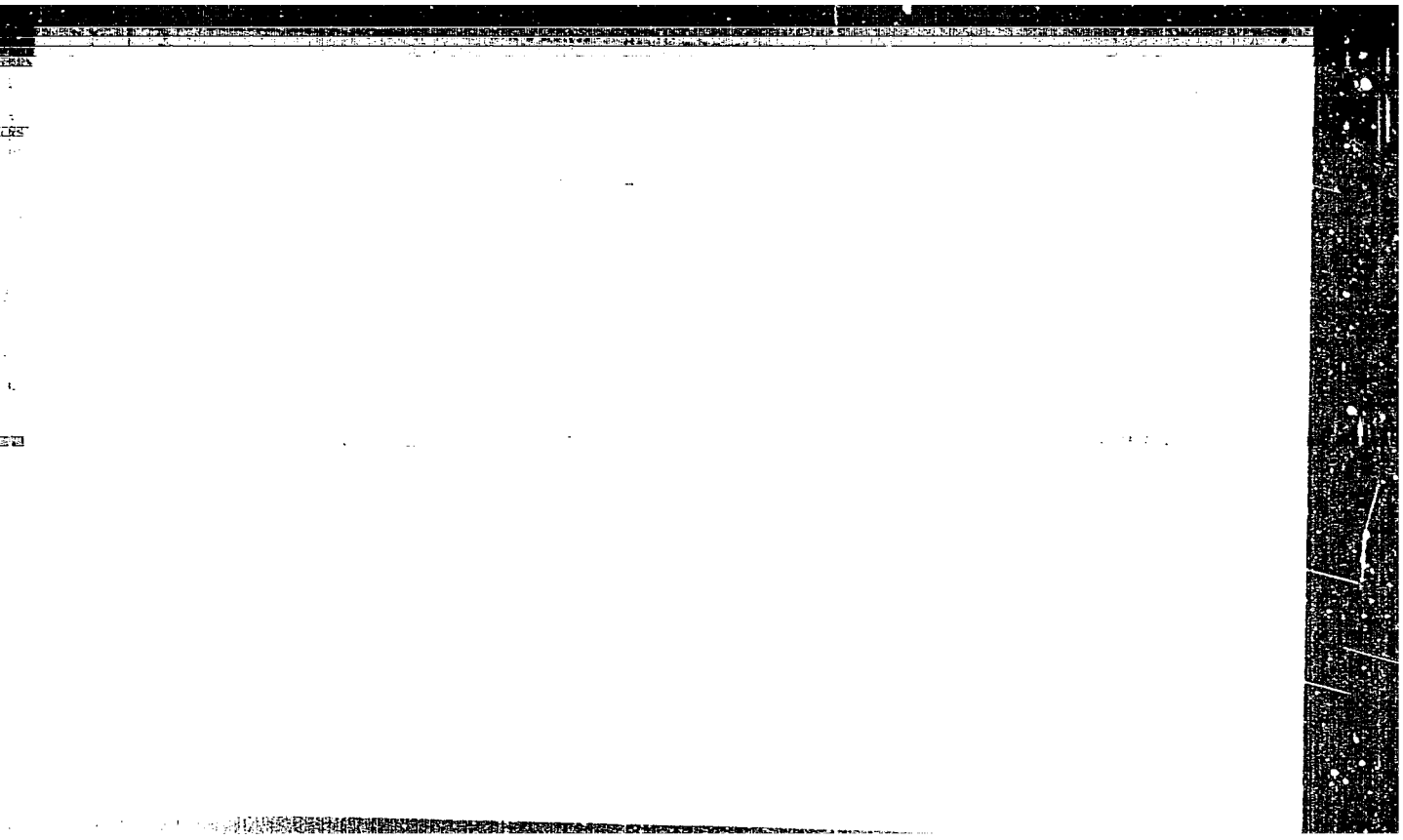
New Year's message to the workers of air transportation. Letecky obzor 8 no.1:1 Ja '64.

1. Namestek ministra dopravy.

KLABOCH, L., ins.; DUFEK, Jaroslav, ins.; HAJEK, E., doc., ins.; REZNICEK, I., ins.; ROD, V., ins.; DRDA, J., ins.; MATOUSEK, B., ins.; KOUSAL, P., ins.; MANDA, V.; CAIS, O., ins.; NOVAK, S.; URBAN, S.; HANKE, M., ins.; VOKURKA, V., ins.; FOGL, J., ins.; HROMIR, M., ins.; SOLIN, J., prof., ins.; SLEZAK, A., ins.; TITLBACH, Z., ins.; DREXLER, J., ins.; HORNA, O., ins.; KUPEC, J., ins.

Discussion on tensiometry. Zpravodaj VZLU no.2:37-46, 69-80 '62.

1. Vyzkumny a zkusebni letecky ustav (for Dufek, Reznicek, Manda, Cais, Drexler and Kupec). 2. Statni vyzkumny ustav topelne techniky (for Klaboch, Rod, Drda, Matousek, Titlbach). 3. Ceske vysoke uceni technicke (for Hajek, Solin). 4. Ustav pro vyzkum motorovych vozidel (for Hanke, Vokurka, Fogl, Hromir). 5. Vyzkumny ustav matematickych stroju (for Horna). 6. Moravan, n.p., Otrokovice (for Kousal). 7. Mikrotechna, Holesovice (for Novak). 8. Zavody V.I.Lenina (for Urban). 9. Svermovy zavody, Vyzkumny ustav (for Slezak).



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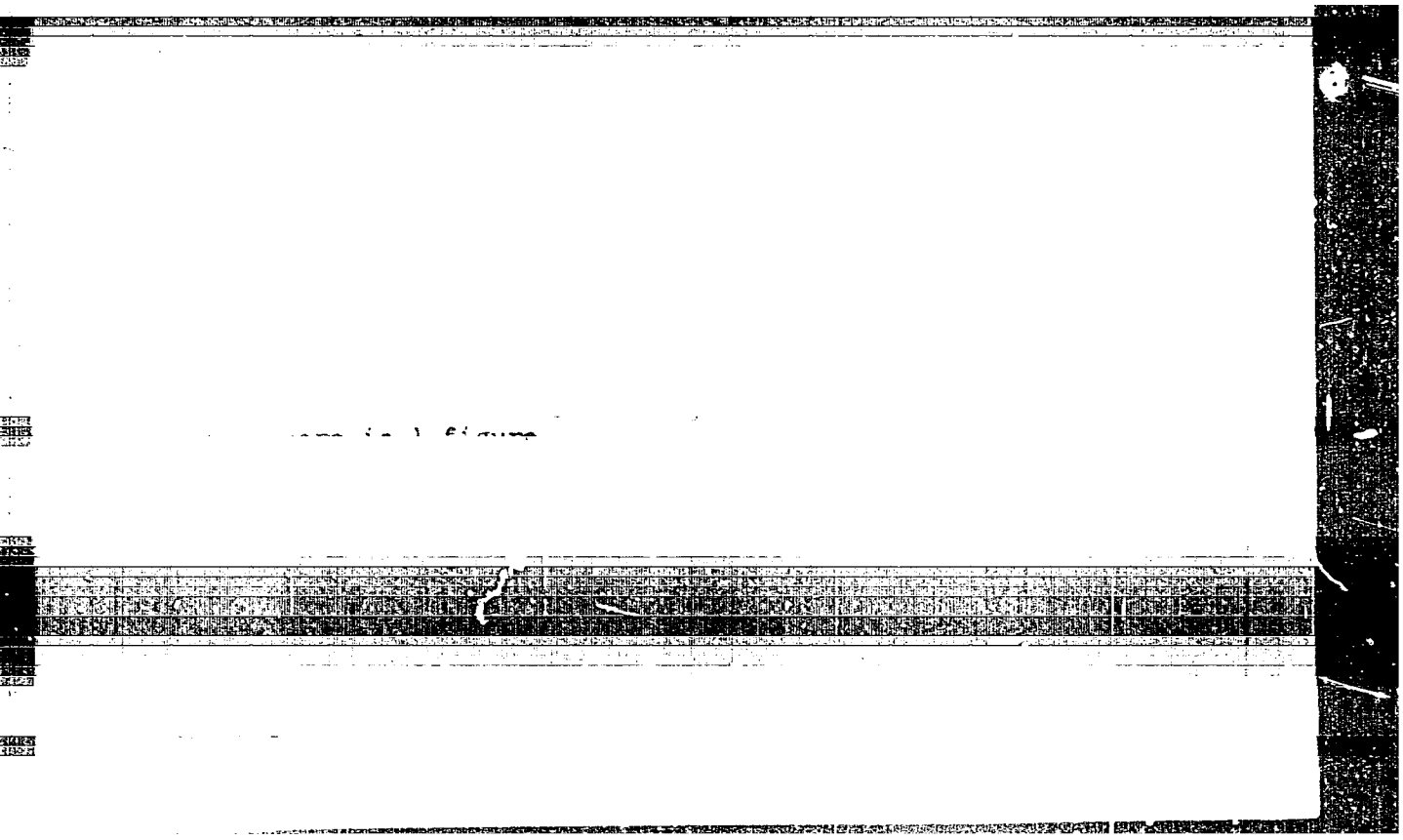

Z/031/62/000/001/001/002
D006/D102

AUTHORS: Dufek, Josef, and Novotný, Josef

TITLE: Group machining of bevel gears

PERIODICAL: Strojírenská výroba, no. 1, 1962, 6-8

TEXT: The authors describe a method of group machining enabling the introduction of copy-turning of bevel gears at plants producing smaller batches. The method was developed for a group of 14 different bevel gears. It requires the use of a chucking fixture which permits exchanging the stop ring simultaneously with the chucking mandrel (in case the hole diameter of the new workpiece differs from the previous one), in order to secure a constant distance between the workpiece and the spindle face. This secures the accuracy of all machined parts because the master templates for the individual group member need not be readjusted but only exchanged. All 14 master templates have a uniform hole diameter so that they fit on one common pin with a fixed stop collar on the left end. An extension pin only has to be exchanged with the template according to the length of the latter. The master-template design has to be such as to make possible machining of both sides of the bevel gear. The method reduces operating times about 30% and is highly

Z/031/62/000/001/001/002
D006/D102

Group machining ....

efficient already at 20-piece batches. There are 6 figures and 1 table.

ASSOCIATION: TOS n.p. (TOS National Enterprise), Olomouc (J. Dufek);
VUOSO, Praha (VUOSO, Prague) (J. Novotny)

Card 2/2

TRUNDA, Dusan; DUFEK, Josef

Roughing of trapezoidal threads by circular milling. Stroj vyr 12 no. 5:362-363 My '64.

1. Machine Tool Factories National Enterprise, Olomouc Plant.

GOPPOLDOVA, Milusa; DUFEK, Ladislav

Selective hydrogenation of pyrolytic gasoline on the W-Ni catalyst. Ropa a uhlie 7 no.3:74-76 Mr '65.

1. Chemicke zavody Ceskoslovensko-sovetskeho pratelstvi National Enterprise, Zaluzi v Krusnych horach.

GOPPOLDOVA, Milusa; DUFEK, Ladislav; AMBROZ, Otakar

A new oxidation inhibitor for pyrolytic gasoline stabilization. Ropa a uhlie 7 no.4:98-101 Ap '65.

1. Chemicke zavody Ceskoslovensko-sovetskeho pratelstvi National Enterprise, Zaluzi.

DUPEK, M.; KLIMA, R.

Dithiazanine - a modern broad spectrum anthelmintic. Cas. lek. cesk. 102 no.48:1327-1329 29 N '63.

1. Stredisko pro cizokrajne choroby fakultni nemocnice v Praze 10, prednosta MUDr. R. Kalivoda.

DUFEK, M.

"Ladislav Sura's Zakladni elektrotechnicka mereni (Basic Electric Measurements); a book review."

Elektrotechnicky Obsor. Praha, Czechoslovakia. Vol. 48, no. 2, Feb. 1958.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 6, Jun 59, Unclas

DUFEK, M.

Instruments for testing electric lines and installations. Zpravy. p. 239.

ELEKTROTECHNICKY OBZOR. (Ministerstvo tezkeho strojirenstvi a Ceskoslovenske vedecka technicka spolecnost pro elek trotechniku pri Ceskoslovenske akademii ved) Praha, Czechoslovakia. Vol. 48, no. 9, Sept. 1959.

Monthly list of East European Accessions (EEAI) LC, vol. 9, no. 1, Jan. 1960.

Uncl.

DUFEK, M MUDr.

DUFEK, M., MUDr.

Our experiences in treating shoulder pains caused by periarticular calcifications. Acta chir. orthop. traum. cech. 22 no.1-2:3-10 Feb 55.

1. Z orthoped. odd. OUNZ v Uherskem Hradisti; predn. MUDr. M.Dufek.

(SHOULDER, diseases
pain caused by periarticular calcification, ther.)
(CALCIFICATION
tendon causing shoulder pain, ther.)

DUFEK, M.

CZECHOSLOVAKIA/Pharmacology. Pharmacognosy. Toxicology - Chemotherapeutic Preparations. T-9

Abs Jour : Referat Zhur - Biologiya, No 16, 1957, 71914

Author : Kristof, M., Dufek, M., Petrovicky, O.
Inst :
Title : A Case of Aquired Toxiplasmosis in an Adult Cured by Pyremetamine.

Orig Pub : Vojenske zdravotn. listy, 1956, 25, No 7, 214-315

Abstract : No abstract.

Card 1/1 - 89 -

DUFEK, M. 3

CZECHOSLOVAKIA

DUFEK, M., MD; EIS, J., MD; KALIVODA, R., MD; ZOULEK, D., MD.

Association for Foreign Diseases (Stredisko pro cizokrajne choroby), Prague (for all)

Prague, Prakticky lekar, No 10, 1963, pp 381-383

"The New Treatment of Helminthosis."

DUFEK, M.

3

CZECHOSLOVAKIA

ZOULEK, D., MD; KALIVODA, R., MD; DUFEK, M., MD; EIS, J., MD.

Association for Foreign Diseases (Stredisko pro cizo-krajne choroby), Prague (for all)

Prague, Prakticky lekar, No 10, 1963, pp 388-390

"Appraisal of Health Faculties in Practice in Climatically and Hygienically Difficult Regions."

DUPEK, M., MUDr.

Experience with training of pediatricians in the field orthopedics.
Cesk.zdravot. 8 no.8:464-466 Ag'60.

1. Prednosta ortopedickeho oddeleni OUNZ Uh. Hradiste.
(PEDIATRICS educ)
(ORTHOPEDICS educ)

DUFEK, M.

Contribution to the appearance of fibrosis of the vastus intermedium muscle in children. Acta chir. orthop. traum.cech. 29 no.2:149-152 '62.

1. Ortopedicke oddeleni OUNZ v Uh. Hradisti, prednosta MUDr. M.Dufek.
(THIGH dis) (OSTEITIS FIBROSA inf & child)

DUFEK, M.

Comments on the surgical treatment of posterior dislocations of the shoulder joint. Acta chir orthop traum cech 30 no. 1: 35-39 F '63.

1. Ortopedicke oddeleni OUNZ v Uherskem Hradisti, prednosta MUDr. M. Dufek.

(SHOULDER DISLOCATION)

LUFEK, M.

Diseases of the soft shoulder. Acta chir. orthop. traum. cech. 31 no.5:435-446 O '64.

1. Ortopedicke oddeleni Obvodniho ustavu narodniho zdravi v Uherskem Hradisti (vedoucí MUDr. M. Lufek).

DUFEK, M.; BLAHA, R. ; KALIVODA, R.

Treatment of lambliasis with metronidazole--Flagyl (Specia).
Cas. lek. cesk. 103 no.37:1033-1034 11 S '64.

1. Stredisko pro cizokrajne choroby v Praze 10, (vedouci MUDr. R. Kalivoda).

LUFEK, M.; BIANA, R.; ZOULEK, D.

Treatment of ancylostomiasis and other parasitic diseases with bephenium hydroxynaphtoate. Cas. lek. cesk. 103 no.42:1166-1169 O 16 '64.

1 Stredisko pro cizokrajne choroby, FN Praha 10 (vedoucí MUDr. B. Kalivoda).